

Title (en)
Method for stabilizing the rotation speed of a hydraulic machine with s-characteristics and installation for converting hydraulic energy into electrical energy

Title (de)
Verfahren zur Stabilisierung der Drehzahl einer hydraulischen Maschine mit S-Charakteristik und Anlage zur Umwandlung hydraulischer Energie in elektrische Energie

Title (fr)
Procédé permettant de stabiliser la vitesse de rotation d'une machine hydraulique avec des caractéristiques s et installation de conversion d'énergie hydraulique en énergie électrique

Publication
EP 2980399 A1 20160203 (EN)

Application
EP 14178909 A 20140729

Priority
EP 14178909 A 20140729

Abstract (en)
This method aims at stabilizing the rotation speed (N) of a machine with S-characteristics and includes steps consisting in a) calculating a target net head (Hn_final) and a target opening (Y_final) to affect guide vanes of the machine, the target net head and the target opening being calculated so that the torque exerted by water flow on the turbine is null and that the machine rotates at a target rotation speed (Nc), b) determining a real net head (Hn) to which the machine is subjected, c) comparing the target net head with the real net head, and d) adjusting the opening of the guide vanes so as to converge towards the target opening (Y_final) and reduce a height difference (μ_1) between the target net head and the real net head.

IPC 8 full level
F03B 3/18 (2006.01); **F03B 15/00** (2006.01); **F03B 15/14** (2006.01)

CPC (source: EP KR RU US)
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Citation (search report)

- [X] US 4640664 A 19870203 - SATO SHINSAKU [JP], et al
- [I] JP H01208572 A 19890822 - TOSHIBA CORP
- [A] GB 2057585 A 19810401 - VOITH GMBH

Cited by
EP3445969A4; US10941750B2

Designated contracting state (EPC)
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DOCDB simple family (publication)
EP 2980399 A1 20160203; CN 106795853 A 20170531; CN 106795853 B 20190628; KR 102337588 B1 20211210; KR 20170040289 A 20170412; RU 2017102700 A 20180828; RU 2017102700 A3 20181224; RU 2711038 C2 20200114; US 11231006 B2 20220125; US 2017268477 A1 20170921; WO 2016016149 A1 20160204

DOCDB simple family (application)
EP 14178909 A 20140729; CN 201580041673 A 20150724; EP 2015067069 W 20150724; KR 20177005500 A 20150724; RU 2017102700 A 20150724; US 201515500057 A 20150724